31.18, 31.22, 31.26, 31.30, 31.34, 31.38, 31.42, 31.46, 31.50, 31.54, 31.58, 31.62, 31.66, 31.70, 31.74, 31.78, 31.82, 31.86, 31.90, 31.94, 31.98, 42.02, 42.04, 42.06, 42.08, 42.10, 42.12, 42.14, 42.16, 42.18, 42.20, 42.22, 42.24, 42.26, 42.28, 42.30, 42.32, 42.34, 42.36, 42.38, 42.40, 42.42, 42.44, 42.46, 42.48, 42.50, 42.52, 42.54, 42.56, 42.58, 42.60, 42.62, 42.64, 42.66, 42.68, 42.70, 42.72, 42.74, 42.76, 42.78, 42.80, 42.82, 42.84, 42.86, 42.88, 42.90, 42.92, 42.94, 44.62, 44.66, 44.70, 44.74, 44.78, 44.82, 44.86, 44.90, 44.94, 44.98, 47.02, 47.04, 47.06, 47.08, 47.10, 47.12, 47.14, 47.16, 47.18, 47.20, 47.22, 47.24, 47.26, 47.28, 47.30, 47.32, 47.34, 47.36, 47.38, 47.40

§ 88.651 State Guard frequency.

The frequency 2726 kHz is available for assignment to the official state guard or comparable organization of a State, territory, possession, or the District of Columbia that is shown to be duly created by law and subject to the control of the highest official of the governmental entity involved, and may be used for emergency communications and for essential communications related to training and maintenance of an efficient organization. In addition to base and mobile stations, this frequency may be assigned to fixed stations on a secondary basis to base or mobile stations. Upon a showing of need, the use of a second frequency in the band 2505-3500 kHz may be made available to these organizations through appropriate arrangements with Government agencies for restricted area use on a shared basis with maximum power output, emission, and hours of operation determined on the basis of the technical conditions involved in using the selected frequency in the particular area.

§ 88.655 National disaster relief frequency.

(a) The frequency 47.42 MHz is **reserved for assignment to organizations established for disaster relief purposes** having an emergency radio communications plan and may be used to operate radio stations for the transmission of communications relating to the safety of life or property, establishing and maintaining temporary relief facilities, and alleviating the emergency situation during periods of actual or impending emergency, or disaster, and until substantially normal conditions are restored.

(b) The **initial application** from a disaster relief organization must be accompanied by a copy of the charter or other authority under which the organization was established and a copy of its communications plan. The plan must fully describe the operation of the radio facilities and describe the method of integration into other communications facilities that normally would be available to assist in alleviating the emergency condition.

§ 88.659 Maritime Services frequencies.

Operation on the frequencies 25.08 and 25.10 MHz is secondary to stations in the maritime mobile service.

§ 88.663 Pairing of 43.86-43.94 MHz with 44.36-44.44 MHz.

In addition to single frequency operation, these frequencies are available to base and mobile stations for the paired frequency mode of operation. For two frequency systems, the separation between base and mobile transmit frequencies is 500 kHz with the base stations transmitting on the higher of the two frequencies.

§ 88.667 Shared use frequencies.

The exclusive use overlay option (see § 88.179) is not available for assignments on the frequencies 151.610-151.975, 154.505-154.560, 461.015625, 461.034375, 461.040625, 461.059375, 461.065625, 461.084375, 461.090625, 461.109375, 461.115625, 461.134375, 461.140625, 461.159375, 461.165625, 461.184375, 461.190625, 461.209375, 461.215625, 461.234375, 461.240625, 461.259375, 461.265625, 461.284375, 461.290625, 461.309375, 461.315625, 461.334375, 461.340625, 461.359375, 461.365625, 461.384375, 461.390625, 461.409375, 461.415625, 461.434375, 461.440625, 461.459375, 461.465625, 461.484375, 461.490625, 461.509375, 461.515625, 461.534375, 461.540625, 461.559375 and 461.565625 MHz.

§ 88.671 Individual channels in the 220-222 MHz band.

The frequencies 220.8525-220.9975 MHz are available to both Federal Government and non-Federal Government applicants, and may be assigned singly or in contiguous channel groups. The frequencies 220.9025-220.9975 MHz are set aside for data only operations until March 31, 2000. See § 88.911(e). SMRs must maintain records of the names and addresses of each customer and the dates that service commenced and terminated. These records must be made available to the Commission upon request. All licensees must report at the time of license renewal the number of mobile units being served to Land Mobile Branch, Licensing Division, Private Radio Bureau, Gettysburg, PA 17326.

§ 88.673 Emergency medical frequencies.

The frequencies 220.9025-220.9225 are available only to persons or entities engaged in the provision of basic or advanced life support services on an ongoing basis.

§ 88.675 Trunked systems in the 220-222 MHz band.

The frequencies 220.0025-220.0975, 220.1525-220.2475, 220.3025-220.3975, 220.4525-220.5475, 220.6025-220.6975 MHz are available to both Federal Government and non-Federal Government applicants for trunked operations or operations of equivalent or greater efficiency for non-commercial or SMR operations. Also see § 88.235(a). SMRs must maintain records of the names and addresses of each customer and the dates that service commenced and

terminated. These records must be made available to the Commission upon request. All licensees must report at the time of license renewal the number of mobile units being served to Land Mobile Branch, Licensing Division, Private Radio Bureau, Gettysburg, PA 17326.

§ 88.679 Co-Primary 450 MHz offset frequencies.

Licensees on the frequencies 451.7875, 451.8125, 451.8375, 451.8625, 451.8875, 451.9125, 451.9375, 451.9625, 451.9875 and 451.0125 may be authorized an antenna height up to 35 m. (100 ft,) above ground. Base stations using these frequencies must be located at least 15 km. (9 miles) from any base station on a frequency offset by 3.125 kHz.

§ 88.683 Simplex operations frequencies.

The frequencies 452.515625-452.609375 MHz are available only for single-frequency operation. (This does not include frequencies listed at § 88.907.)

§ 88.687 MEDS-9A, MEDS-9B, MEDS-10A, MEDS-10B.

For uniformity in usage, the frequency pairs 462.946875/467.946875, 462.953125/467.953125, 462.971875/467.971875, and 462.978125/467.978125 MHz may be referred to as MEDS-9A, MEDS-9B, MEDS-10A, MEDS-10B and may be used for intra-system and inter-system mutual assistance purposes. Systems using these channels may also transmit one-way alert-paging signals to ambulance and rescue squad personnel.

§ 88.691 MEDS-1A - MEDS-8B.

(a) For uniformity in usage, these frequency pairs may be referred to by channel name as follows:

462.996875/467.996875	MED-1A
463.003125/468.003125	MED-1B
463.021875/468.021875	MED-2A
463.028125/468.028125	MED-2B
463.046875/468.046875	MED-3A
463.053125/468.053125	MED-3B
463.071875/468.071875	MED-4A
463.078125/468.078125	MED-4B
463.096875/468.096875	MED-5A
463.103125/468.103125	MED-5B
463.121875/468.121875	MED-6A
463.128125/468.128125	MED-6B
463.146875/468.146875	MED-7A

463.153125/468.153125	MED-7B
463.171875/468.171875	MED-8A
463.178125/468.178125	MED-8B

(b) These channels are not available for **exclusive use overlay assignments.**

(c) **Multichannel capability.** Mobile or portable stations may employ equipment capable of transmitting and receiving on some or all of these 16 frequency pairs.

(d) The continuous mode of operation may be used for **telemetry** on these frequencies.

TECHNICAL AND OPERATIONAL LIMITATIONS

§ 88.711 Technical limitations.

The following sections govern technical restrictions on specific channels in addition to, or instead of those in Subpart C.

§ 88.713 Higher-power police low band VHF systems.

Base stations operating on one of the frequencies:

1722 kHz, 1730, 2490, 42.02 MHz, 42.04, 42.06, 42.08, 42.10, 42.12, 42.14, 42.16, 42.32, 42.34, 42.36, 42.38, 42.42, 42.44, 42.46, 42.48, 42.50, 42.52, 42.54, 42.56, 42.58, 42.60, 42.62, 42.64, 42.80, 42.82, 42.84, 42.86, 42.88, 42.90, 42.92, 42.94, 44.62, 44.66, 44.70, 44.74, 44.94, 44.98, 45.02, 45.06

serving state police mobile units may be authorized to use a maximum output power in excess of the maximum indicated in § 88.429, but not in excess of 750 watts. Such operation is secondary to other stations.

§ 88.717 Self-powered vehicle detectors.

The frequencies 47.02 - 47.40 MHz may be used for the operation of self-powered vehicle detectors by licensees of base/mobile stations in the Public Safety Radio Service subject to the following conditions:

(a) These frequencies may be used by licensees in the Public Safety Radio Service **without a separate license** for the purpose of operating self-powered vehicle detectors for traffic control and safety purposes.

(b) All stations are limited to **100 milliwatts** carrier power and F7W, F7X, F8W, F8X, F9W or F9X emissions.

(c) All operation is on a **secondary**, non-interference basis.

§ 88.721 110 watt operations.

Operation on the frequencies 27.43, 27.45, 30.76, 30.80, 30.88, 30.92, 30.96, 31.00, 31.04, 31.16, 31.20, 31.24 33.16, 35.06, 35.08, 35.10, 35.12, 35.14, 35.18, 35.70, 35.72, 35.88, 35.90, 35.92, 42.96 and 43.00 MHz is limited to a maximum transmitter output power of 110 watts.

§ 88.725 Slave locomotive control frequencies.

The frequencies 452.915625/457.915625, 452.921875/457.921875, 452.928125/457.928125, 452.934375/457.934375, 452.940625/457.940625, 452.946875/457.946875, 452.953125/457.953125 and 452.959375/457.959375 MHz are reserved for controlling locmotives. A1, A2, F1 and F2 emissions may be authorized.

§ 88.729 Airport frequencies.

Operation on the frequencies 460.640625-460.884375/460.640625-460.884375 MHz is subject to the following restrictions:

(a) Except as provided for in § 88.921, these frequency are only available for assignment to stations located **on or near airports** to persons or entities engaged in furnishing commercial air transportation service, or to a corporation or association for the purpose of furnishing radio communications service to persons so engaged. Stations on this frequency may be used only in connection with the servicing and supplying of aircraft.

(b) Common frequency **signal boosters** may be employed in accordance with the following criteria:

(1) The amplified signal is retransmitted only on the exact frequency of the originating base station.

(2) The booster is equipped with automatic gain control circuitry that will limit the total output of the booster to 500 milliwatts under all conditions.

(3) All such devices are installed with sufficient isolation between receiving and retransmitting circuits to prevent oscillation.

(4) The power of any emission except on frequencies within the 460.6375-460.8875 MHz band or on which there is an input signal to the booster, must be reduced at least 35 decibels below the total power output of the booster.

(5) In the event control of the booster is impaired due to its activation by signals other than those intended by the licensee to be retransmitted, the licensee must provide the booster with means of control such that it will be activated only by signals intended to be retransmitted, and boosters so

provided with such means of control must also be provided with an automatic time-delay or clock device that will deactivate the booster not more than 3 minutes after its activation.

(6) If signal boosters are to be used in conjunction with other facilities, the number of such boosters must be stated on the license application.

(c) Operations on these frequencies is limited to a **maximum output of 20 Watts** except as provided in § 88.921.

§ 88.733 Central station frequencies.

(a) Persons or entities rendering a **central station protection service** are authorized to operate fixed stations on the frequencies 460.890625-461.009375 MHz for the transmission of tone or impulse signals on a secondary, noninterference basis to base/mobile operations subject to the following conditions and limitations.

(1) The maximum duration of any one nonvoice signal may not exceed 2 seconds and must not be transmitted more than three times.

(2) Systems employing automatic interrogation must be limited to nonvoice techniques and must not be activated for this purpose more than 10 seconds out of any 60-second period. This 10-second frame includes both transmit and response times.

(3) Frequency loading resulting from the use of secondary signaling will not be considered in whole or in part as a justification for authorizing additional frequencies in the licensee's mobile system. These frequencies may not be used exclusively for secondary signaling.

(4) The output power must not exceed 30 watts (at the remote site).

(5) A1D, A2D, F1D, or F2D emission may be authorized.

(6) The transmitter must be designed to deactivate automatically after 3 minutes of continuous carrier radiation.

(7) Operational fixed stations authorized under this paragraph are exempt from the requirements of §§ 88.95(b) and 88.489.

(8) On these frequencies, base, mobile relay or mobile stations may transmit secondary tone or impulse signals to receivers, as provided in this section.

(b) Licensees providing a central station protection service **may communicate with police or fire stations**, or vehicles, on these frequency, and may install licensed transmitting units that operate on these frequencies at police or fire stations, or in police or fire vehicles, if the frequency's

primary use is in a base/mobile system for a central station commercial protection service.

§ 88.737 Restrictions on trunking in the 851-854.750 MHz band.

(a) A constructed system in the 851-854.750 MHz band that is authorized to operate in the conventional mode may be combined with an existing system above 800 MHz authorized to operate in the trunked mode by assignment of an authorized grant of one station to the other only if:

(1) The trunked system is **loaded** to 70 mobiles per channel:

(2) The purpose of the assignment is to **expand the trunked system**.

(b) For all trunked systems that are not SMRs, the assignment application must include a statement from the trunked system's own **frequency coordinator** verifying that there are no available frequencies in the trunked system's service category in the frequency bands 806-824/851-869 MHz (trunked systems that are SMRs must submit evidence of existence of a current waiting list for SMRs in the geographic area in lieu of this requirement).

(c) Each application must include a signed statement **listing any co-channel licensees** (including call signs) located within 70 miles of the primary site of the trunked system verifying that they all have agreed to the proposed trunked use (see Section 88.219 of this part).

(d) Each of the stations licensed for channels that are to be combined must be **constructed and operating**. Each application must include a statement of construction and operation signed by the licensee of the conventional system. The statement of construction and operation must include the date of construction, location constructed (coordinates), the date the system was placed in operation (i.e., the date mobiles/portables began to interact with the mobile relay(s)), and a listing of the frequencies that are operational.

(e) All frequencies being trunked together must be located at a **primary site**.

(f) As a result of the assignment the assignee must have a **number of channels** that does not exceed one channel more than its current loading warrants. If, as a result of the assignment, the assignee obtains the maximum number of channels possible (one channel more than current loading warrants), and if the assignee is on the SMR waiting list for the geographic area in which it receives the assignment, the assignee forfeits its position on that waiting list.

(g) The assignee will receive a **new five-year license grant**.

(h) Partial assignments are not permitted. See § 88.127.

(i) Applicatins for conventional SMRs on these frequencies must be coordinated (see § 88.603) by any one of the frequency coordinators certified to coordinate applications above 800 MHz.

FREQUENCIES WITH GEOGRAPHIC LIMITATIONS

§ 88.751 Additional frequencies available.

The following sections govern frequencies available only in specific geographic areas, including the U.S./Canadian and U.S./Mexican border areas.

§ 88.753 General Category Pool frequencies in Puerto Rico and the Virgin Islands.

The frequencies 150.815-151.475, 152.300-152.315, 152.345-152.375, 152.405-152.420, 157.550-157.580, 157.605-157.640 and 157.665-157.685 MHz designated for use in the Non-Commercial or Public Safety Radio Services are also available in the General Category Pool in Puerto Rico and the Virgin Islands.

§ 88.757 Non-Commercial Radio Service frequencies in Puerto Rico and the Virgin Islands.

The base station frequencies listed below are available to Non-Commercial Radio Service licensees only in Puerto Rico and the Virgin Islands on a shared basis with the Public Safety Radio Service. The mobile only frequencies may be assigned to a control station associated with a mobile relay system if it is also assigned to the associated mobile station.

Base and mobile	Mobile only
159.240 MHz	160.410 MHz
159.245	160.415
159.255	160.425
159.260	160.430
159.270	160.440
159.275	160.445
159.285	160.455
159.290	160.460
159.300	160.470
159.305	160.475
159.315	160.485
159.320	160.490
159.330	160.500
159.335	160.505
159.345	160.515
159.350	160.520
159.360	160.530
159.365	160.535

159.375	160.545
159.380	160.550
159.390	160.560
159.395	160.565
159.405	160.575
159.410	160.580
159.420	160.590
159.425	160.595
159.435	160.605
159.440	160.610

§ 88.761 New York City only frequencies.

The frequencies 166.250, and 170.150 MHz may be assigned to stations in the Public Safety Radio Service, only at points within 240 km. (150 mi.) of New York, N.Y. Technical standards for these channels are those for Federal Government channels, rather than Subpart C.

§ 88.765 Forest Fire frequencies available east of the Mississippi.

The frequencies 170.475, 171.425, 171.575 and 172.275 MHz will be assigned only in areas east of the Mississippi and only to licensees directly responsible for the prevention, detection, and suppression of forest fires or to conservation agencies for mobile relay operation. Such use will be secondary to Federal use. Technical standards for these channels are those for Federal Government channels, rather than Subpart C.

§ 88.769 Forest Fire frequencies available west of the Mississippi.

The frequencies 170.425, 170.575, 171.475, 172.225 and 172.375 MHz will be assigned only in areas west of the Mississippi and only to licensees directly responsible for the prevention, detection, and suppression of forest fires. Such use will be secondary to Federal use. Technical standards for these channels are those for Federal Government channels, rather than Subpart C.

§ 88.773 Authorization in the 421-430 MHz band.

The frequency bands 422.1875-425.4875 MHz and 427.1875-429.9875 MHz are available for use in the Detroit, Michigan and Cleveland, Ohio areas. The bands 423.8125-425.4875 MHz and 428.8125-429.9875 MHz are available for use in the Buffalo, New York area. Sections 88.775 and 88.777 address the specific rules applicable to these bands. Use of these bands is also subject to the general technical standards, and application procedures are the same as those contained elsewhere in this Part for the 450-470 MHz band. See §§ 88.1189 and 88.1203 for rules on operational fixed stations. Private land mobile use of these frequencies is subject to accepting any interference from Federal

Government radiolocation operations. Also see § 88.245 on bandwidth reduction.

§ 88.775 Available frequencies in the 421-430 MHz band.

(a) The frequencies 422.190625 - 424.984375 MHz are **paired** with frequencies 427.190625 - 429.984375 MHz, respectively. Only the lower half of each frequency pair, available for base station operation, is listed in the tables. Corresponding mobile and control station frequencies are 5 MHz higher than the base station frequency. The frequencies 424.990625 - 425.484375 MHz are unpaired and are available for either single frequency dispatch or paging operations.

(b) The following base station frequencies are available for assignment in the **Public Safety Radio Service in the Detroit and Cleveland** areas:

422.990625, 422.996875, 423.003125, 423.009375, 423.015625, 423.021875,
423.028125, 423.034375, 423.040625, 423.046875, 423.053125, 423.059375,
423.065625, 423.071875, 423.078125, 423.084375, 423.090625, 423.096875,
423.103125, 423.109375, 423.115625, 423.121875, 423.128125, 423.134375,
423.140625, 423.146875, 423.153125, 423.159375, 423.165625, 423.171875,
423.178125, 423.184375, 423.190625, 423.196875, 423.203125, 423.209375,
423.215625, 423.221875, 423.228125, 423.234375, 423.240625, 423.246875,
423.253125, 423.259375, 423.265625, 423.271875, 423.278125, 423.284375,
423.290625, 423.296875, 423.303125, 423.309375, 423.315625, 423.321875,
423.328125, 423.334375, 423.340625, 423.346875, 423.353125, 423.359375,
423.365625, 423.371875, 423.378125, 423.384375, 423.390625, 423.396875,
423.403125, 423.409375, 423.415625, 423.421875, 423.428125, 423.434375,
423.440625, 423.446875, 423.453125, 423.459375, 423.465625, 423.471875,
423.478125, 423.484375, 423.490625, 423.496875, 423.503125, 423.509375,
423.515625, 423.521875, 423.528125, 423.534375, 423.540625, 423.546875,
423.553125, 423.559375, 423.565625, 423.571875, 423.578125, 423.584375,
423.590625, 423.596875, 423.603125, 423.609375, 423.615625, 423.621875,
423.628125, 423.634375, 423.640625, 423.646875, 423.653125, 423.659375,
423.665625, 423.671875, 423.678125, 423.684375, 423.690625, 423.696875,
423.703125, 423.709375, 423.715625, 423.721875, 423.728125, 423.734375,
423.740625, 423.746875, 423.753125, 423.759375, 423.765625, 423.771875,
423.778125, 423.784375, 423.790625, 423.796875, 423.803125, 423.809375

(c) The following base station frequencies are available for assignment in the **Non-Commercial Radio Service in the Detroit and Cleveland areas**:

422.190625, 422.196875, 422.203125, 422.209375, 422.215625, 422.221875,
422.228125, 422.234375, 422.240625, 422.246875, 422.253125, 422.259375,
422.265625, 422.271875, 422.278125, 422.284375, 422.290625, 422.296875,
422.303125, 422.309375, 422.315625, 422.321875, 422.328125, 422.334375,
422.340625, 422.346875, 422.353125, 422.359375, 422.365625, 422.371875,
422.378125, 422.384375, 422.390625, 422.396875, 422.403125, 422.409375,
422.415625, 422.421875, 422.428125, 422.434375, 422.440625, 422.446875,
422.453125, 422.459375, 422.465625, 422.471875, 422.478125, 422.484375,
422.490625, 422.496875, 422.503125, 422.509375, 422.515625, 422.521875,

422.528125, 422.534375, 422.540625, 422.546875, 422.553125, 422.559375, 422.565625, 422.571875, 422.578125, 422.584375

(d) The following base station frequencies are available for assignment in the **General Category Pool in the Detroit and Cleveland areas**:

422.590625, 422.596875, 422.603125, 422.609375, 422.615625, 422.621875, 422.628125, 422.634375, 422.640625, 422.646875, 422.653125, 422.659375, 422.665625, 422.671875, 422.678125, 422.684375, 422.690625, 422.696875, 422.703125, 422.709375, 422.715625, 422.721875, 422.728125, 422.734375, 422.740625, 422.746875, 422.753125, 422.759375, 422.765625, 422.771875, 422.778125, 422.784375, 422.790625, 422.796875, 422.803125, 422.809375, 422.815625, 422.821875, 422.828125, 422.834375, 422.840625, 422.846875, 422.853125, 422.859375, 422.865625, 422.871875, 422.878125, 422.884375, 422.890625, 422.896875, 422.903125, 422.909375, 422.915625, 422.921875, 422.928125, 422.934375, 422.940625, 422.946875, 422.953125, 422.959375, 422.965625, 422.971875, 422.978125, 422.984375

(e) The following base station frequencies are available for assignment in the **Public Safety Radio Service in the Buffalo, Detroit and Cleveland** areas:

423.815625, 423.821875, 423.828125, 423.834375, 423.840625, 423.846875, 423.853125, 423.859375, 423.865625, 423.871875, 423.878125, 423.884375, 423.890625, 423.896875, 423.903125, 423.909375, 423.915625, 423.921875, 423.928125, 423.934375, 423.940625, 423.946875, 423.953125, 423.959375, 423.965625, 423.971875, 423.978125, 423.984375, 423.990625, 423.996875, 424.003125, 424.009375, 424.015625, 424.021875, 424.028125, 424.034375, 424.040625, 424.046875, 424.053125, 424.059375, 424.065625, 424.071875, 424.078125, 424.084375, 424.090625, 424.096875, 424.103125, 424.109375, 424.115625, 424.121875, 424.128125, 424.134375, 424.140625, 424.146875, 424.153125, 424.159375, 424.165625, 424.171875, 424.178125, 424.184375, 424.190625, 424.196875, 424.203125, 424.209375, 424.215625, 424.221875, 424.228125, 424.234375, 424.240625, 424.246875, 424.253125, 424.259375, 424.265625, 424.271875, 424.278125, 424.284375, 424.290625, 424.296875, 424.303125, 424.309375, 424.315625, 424.321875, 424.328125, 424.334375, 424.340625, 424.346875, 424.353125, 424.359375, 424.365625, 424.371875, 424.378125, 424.384375, 425.240625, 425.246875, 425.253125, 425.259375, 425.265625, 425.271875, 425.278125, 425.284375, 425.290625, 425.296875, 425.303125, 425.309375, 425.315625, 425.321875, 425.328125, 425.334375, 425.340625, 425.346875, 425.353125, 425.359375, 425.365625, 425.371875, 425.378125, 425.384375, 425.390625, 425.396875, 425.403125, 425.409375, 425.415625, 425.421875, 425.428125, 425.434375, 425.440625, 425.446875, 425.453125, 425.459375, 425.465625, 425.471875, 425.478125, 425.484375

(f) The following base station frequencies are available for assignment in the **Non-Commercial Radio Service in the Buffalo, Detroit and Cleveland** areas:

424.390625, 424.396875, 424.403125, 424.409375, 424.415625, 424.421875, 424.428125, 424.434375, 424.440625, 424.446875, 424.453125, 424.459375, 424.465625, 424.471875, 424.478125, 424.484375, 424.490625, 424.496875,

424.503125, 424.509375, 424.515625, 424.521875, 424.528125, 424.534375,
424.540625, 424.546875, 424.553125, 424.559375, 424.565625, 424.571875,
424.578125, 424.584375, 424.590625, 424.596875, 424.603125, 424.609375,
424.615625, 424.621875, 424.628125, 424.634375, 424.640625, 424.646875,
424.653125, 424.659375, 424.665625, 424.671875, 424.678125, 424.684375,
425.115625, 425.121875, 425.128125, 425.134375, 425.140625, 425.146875,
425.153125, 425.159375, 425.165625, 425.171875, 425.178125, 425.184375,
425.190625, 425.196875, 425.203125, 425.209375, 425.215625, 425.221875,
425.228125, 425.234375

(g) The following base station frequencies are available for assignment in the **General Category Pool in the Buffalo, Detroit and Cleveland** areas:

424.690625, 424.696875, 424.703125, 424.709375, 424.715625, 424.721875,
424.728125, 424.734375, 424.740625, 424.746875, 424.753125, 424.759375,
424.765625, 424.771875, 424.778125, 424.784375, 424.790625, 424.796875,
424.803125, 424.809375, 424.815625, 424.821875, 424.828125, 424.834375,
424.840625, 424.846875, 424.853125, 424.859375, 424.865625, 424.871875,
424.878125, 424.884375, 424.890625, 424.896875, 424.903125, 424.909375,
424.915625, 424.921875, 424.928125, 424.934375, 424.940625, 424.946875,
424.953125, 424.959375, 424.965625, 424.971875, 424.978125, 424.984375,
424.990625, 424.996875, 425.003125, 425.009375, 425.015625, 425.021875,
425.028125, 425.034375, 425.040625, 425.046875, 425.053125, 425.059375,
425.065625, 425.071875, 425.078125, 425.084375, 425.090625, 425.096875,
425.103125, 425.109375

See § 88.309 for interservice sharing rules.

§ 88.777 Location limitations in the 421-430 MHz band.

(a) **Base or control stations** must be located **within 30 miles** of the center of Buffalo or **50 miles** of the center of Detroit. In Cleveland, base or control stations will be allowed at locations north of line A that are within 30 miles of the city center. In addition, low power (2 watts or less) base stations may locate within 50 miles of the center of Buffalo. See § 88.7 for the coordinates of the centers of these areas.

(b) **Mobile operation** must be confined to within 50 miles of the centers of Detroit, Cleveland, or Buffalo.

§ 88.781 Authorization in the 470-512 MHz band (UHF-TV Sharing)

Sections 88.781-88.791 govern the authorization and use of frequencies by land mobile stations in the band 470-512 MHz on a geographically shared basis with Television Broadcast stations. Under this special sharing plan, different radio services are allocated different specific frequencies in this band depending on the geographic urban area involved. See § 88.429(j) for the special protection criteria for these frequencies, and § 88.293 for the frequency loading criteria.

§ 88.783 Geographic availability of frequencies.

Base station frequencies in the band 470-512 MHz are available for assignment in the urbanized areas listed below. Assignable frequencies occur in increments of 6.25 kHz. The separation between base and mobile transmit frequencies is 3 MHz for two frequency operations. Adjacent channel pairs may be combined to form wideband channels provided that the spectrum efficiency standard is met.

Urbanized area	Channel	Frequencies (megahertz)
Boston, Mass	14	470.303125-472.996875
	16	482.303125-485.996875
Chicago, Ill.<1>	14	470.303125-472.996875
	15	476.303125-479.996875
Cleveland, Ohio<2>	14	470.303125-472.996875
	15	476.303125-479.996875
Dallas/Fort Worth, TX	16	482.303125-485.996875
Detroit, Mich.<3>	15	476.303125-479.996875
	16	482.303125-485.996875
Houston, Tex	17	488.303125-491.996875
Los Angeles, Calif	14	470.303125-472.996875
	16	482.003125-484.996875
	20	506.303125-509.996875
Miami, Fla	14	470.303125-472.996875
New York/N.E. N.J	14	470.303125-472.996875
	15	476.303125-479.996875
Philadelphia, Pa	19	500.303125-503.996875
	20	506.303125-509.996875
Pittsburgh, Pa	14	470.303125-472.996875
	18	494.303125-497.996875
San Francisco/Oakland, CA	16	482.303125-485.996875
	17	488.303125-491.996875
Wash., D.C./Md./Va	17	488.303125-491.996875
	18	494.303125-497.996875

See § 88.1601 for the geographic centers of these urbanized areas.

<1>In the Chicago, Ill., urbanized area, channel 15 frequencies may be used for paging operations in addition to low power base/mobile usages, where applicable protection requirements for ultrahigh frequency television stations are met.

<2>Channels 14 and 15 are not available in Cleveland, Ohio, until further order from the Commission.

<3> Channels 15 and 16 are not available in Detroit, Mich., until further order from the Commission.

§ 88.785 Eligibility for the 470-512 MHz band.

Except for Channel 16, which is available in Los Angeles for use by public safety users, all frequencies are available in the General Category Pool.

§ 88.787 Location of 470-512 MHz stations.

(a) The transmitter site(s) for **base station(s)**, including mobile relay stations, must be located **not more than 80 km.** (50 mi.) from the geographic center of the urbanized area listed in § 88.783.

(b) **Mobile units** must be operated within 48 km. (30 mi.) of their associated base station or stations. Such units may not be operated aboard aircraft in flight.

(c) **Control stations** must be located within the area of operation of the mobile units.

(d) Base and control stations must be located a **minimum of 1.6 km. (1 mi.) from local television stations** operating on UHF TV channels separated by 2, 3, 4, 5, 7, and 8 TV channels from the television channel in which the base station will operate.

§ 88.791 Use of frequencies in the 476-494 MHz band in the Southern Louisiana-Texas offshore zone.

(a) The frequency bands from 490-491 and 493-494 MHz will be available for assignment to stations governed by this part within **Zone A**. The boundaries of Zone A are from longitude 87°45′ on the east to longitude 94°00′ on the west, and from the three mile limit along the Gulf of Mexico shoreline on the north to the limit of the Outer Continental Shelf on the south. The frequency bands from 484-485 and 476-488 MHz will be available for assignment to stations governed by this part within **Zone B**. The boundaries of Zone B are from longitude 87°45′ on the east to longitude 95°00′ on the west and from the 3-mile limit along the Gulf of Mexico shoreline on the north to the limit of the Outer Continental Shelf on the south. The frequency bands from 478-479 and 481-481 MHz will be available for assignment to stations governed by this part within **Zone C**. The boundaries of Zone C are from longitude 94°00′ on the east, the 3-mile limit on the north and west, a 282 km (175 mi) radius from the reference point at Linares, N.L., Mexico on the southwest, latitude 26°00′ on the south, and the limits of the Outer Continental Shelf on the southeast. These frequencies may also be assigned to fixed stations located on shore designed to provide communications service within the zone.

(b) **Offshore** base/mobile, and offshore and shore fixed stations may be authorized.

(c) F2, F3, F4, F9, and A2, A3, A4, and A9 **emissions** may be authorized.

(d) Offshore stations must **protect cochannel TV stations** on Channels 15, 16 and 17. Station operating parameters shall be in accordance with the values given in Table D-1 of this section.

Table D-1

Protection of Cochannel Television Stations by Offshore Stations Operating in the Southern Louisiana-Texas Offshore Zone (65 dB Protection); Maximum ERP (in Watts)

Distance from transmitter to co-channel TV station in km (mi)	Antenna height above sea level meters (ft)		
	31(100)	46(150)	61(200)
338(210)	1,000	1,000	1,000
330(205)	1,000	900	800
322(200)	800	710	630
314(195)	590	520	450
306(190)	450	400	330
298(185)	320	280	240
290(180)	250	210	175
282(175)	175	150	130
274(170)	130	110	100
265(165)	95	80	70
257(160)	65	55	50
249(155)	50	40	35
241(150)	35	30	25

Note:-To determine the maximum permissible effective radiated power:

(1) As specified in § 73.611 of this chapter, determine the distance between the proposed station and the cochannel television station. If the exact mileage does not appear in Table D-1 of this section, the next lower mileage separation is to be used.

(2) Opposite this mileage figure ERPs are given that may be used for antenna heights of 31, 46, and 61 meters (100, 150, or 200 ft) ASL. If the exact antenna height is not shown, the ERP allowed will be that shown for the next higher antenna height.

(e) Shore stations communicating point-to-point with offshore stations will be permitted at least the same **ERP** as the offshore station, but only in the direction of the offshore station. A directional antenna must be used and the rearward radiated power from the antenna in a sector ±22 1/2° from the line joining the shore antenna to the cochannel television station must not exceed those shown in Table D-2 of this section.

Table D-2

Maximum Rearward Effective Radiated Power Allowed for Shore Stations; Rearward Effective Radiated Power (in Watts) From Shore Antenna in a Sector ± 22 1/2° From the Line Joining the Shore Antenna to the Cochannel Television Station

Distance from transmitter to cochannel television station in km (mi)	Antenna height above ground meters (ft)					
	31 (100)	46 (150)	61 (200)	91 (300)	152 (500)	229 (750)
298 (185)	320	280	240	190	125	90
290 (180)	250	210	175	125	100	60
282 (175)	175	150	130	100	70	50
274 (170)	130	110	100	75	40	35
265 (165)	95	82	70	50	35	25
257 (160)	65	55	50	40	25	20
249 (155)	50	40	35	30	20	15
241 (150)	35	30	25	20	15	10
233 (145)	25	20	18	15	10	7
225 (140)	18	15	13	10	7	5
217 (135)	13	10	9	7	5	3
209 (130)	10	8	6	5	3	2
201 (125)	7	6	5	4	3	2
193 (120)	5	4	3	3	2	1

Note: As an example of the use of Tables D-1 and D-2, assume an offshore station located 290 km (180 mi) from TV Channel 17 located in Bude, Miss. with an antenna height of 31 m (100 ft). Table D-1 allows this station to operate with 250 W ERP. Now assume the shore station communicating with the offshore station is 48 km (30 mi) from the offshore station and 241 km (150 mi) from Bude, Miss. The shore station antenna height is 152 m (500 ft) above ground. The shore station will be allowed the same ERP as the offshore station (250 W) in the direction of the offshore station. Table D-2 indicates that the effective radiated power in a sector ±22 1/2° from the line joining the shore antenna to Bude, Miss. can only be 15 W. Consequently, a directional antenna must be used whose minimum front-to-back ratio over this 45° sector must be at least 12.2 dB. (250 W forward power to 15 W rearward power is a power ratio of 16.6 or 12.2 dB).

(f) To **protect cochannel television stations**, no shore station will be allowed closer than 193 km (120 mi) from the cochannel television station.

(g) To **protect adjacent channel television stations**, no shore or offshore station will be allowed within an 129 km (80 mi) distance of the adjacent channel television station.

(h) **Mobile stations** must not operate closer to shore than 6.4 km (4 mi) beyond the three mile limit nor operate with an ERP in excess of 100 watts with 9.1 m (30 ft) maximum antenna height.

(i) **Mobile stations installed in aircraft** must operate 11.3 km (7 mi) beyond the three mile limit and must not operate with an ERP in excess of 1 watt or at heights in excess of 305 km (1000 ft) AMSL.

(j) The following **frequencies are available for assignment** in all services for use in the Zones as defined in paragraph (a) of this section.

Table D-3

Paired Frequencies (Megahertz)		
Zone	Transmit (or receive)	Receive (or transmit)
A	490.128125-490.981875	493.128125-493.981875
B	484.128125-484.981875	487.128125-487.981875
C	478.128125-478.981875	481.128125-481.981875

Assignable frequency pairs occur in increments of 6.25 kHz. Multiple channel channel assignments in accordance with the spectrum efficiency standard are permitted. See § 88.433.

(k) **Fixed stations** operating point-to-point will be assigned frequencies beginning with 490.128125/493.128125 MHz (Zone A), 484.128125/487.128125 MHz (Zone B) and 478.128125/478.128125 MHz (Zone C) and progressing upwards utilizing available frequencies toward the end of the band. Offshore base/mobile stations will be assigned frequencies beginning at 490.981875/493.981875 MHz (Zone A), 484.981875/487.981875 MHz (Zone B) and 478.981875/481.981875 MHz (Zone C) and progressing downwards utilizing available frequencies toward the beginning of the band.

(l) Stations located east of 92° W longitude in the Southern Louisiana Offshore Zone may be authorized frequencies that are **offset by 12.5 kHz** from regularly assigned Zone A frequencies (490-491 and 493-494 MHz). Such assignments will be on a secondary, non-interference basis to primary authorized stations and will be entitled to protection from these stations.

§ 88.801 U.S./Mexican border area.

The channels in the 806-821/851-866 MHz band available 110 kilometers (68.4 miles) or less from the U.S./Mexico border are offset 12.5 kHz lower in frequency than those specified in §§ 88.613-88.625. Paired base station frequencies will be 45 MHz higher in frequency than mobile frequencies. Stations located on Mt. Lemmon, serving the Tucson, AZ area, will only be

authorized offset frequencies. The frequencies 896-901/935-940 MHz are not available for assignment in the U.S./Mexico Border area.

(a) **Public Safety Radio Service, 806-821/851-866 MHz Band.** The following 85 frequencies are available in the U.S./Mexican border area:

856.025, 856.050, 856.075, 856.100, 856.125, 856.150, 856.175, 856.200, 856.225, 856.250, 857.000, 857.025, 857.050, 857.075, 857.100, 857.125, 857.150, 857.175, 857.200, 857.225, 857.250, 858.000, 858.025, 858.050, 858.075, 858.100, 858.125, 858.150, 858.175, 858.200, 858.225, 858.250, 859.000, 859.025, 859.050, 859.075, 859.100, 859.125, 859.150, 859.175, 859.200, 859.225, 859.250, 860.000, 860.025, 860.050, 860.075, 860.100, 860.125, 860.150, 860.175, 860.200, 860.225, 860.250, 861.000, 861.050, 861.100, 861.150, 861.200, 861.250, 862.000, 862.050, 862.100, 862.150, 862.200, 862.250, 863.000, 863.050, 863.100, 863.150, 863.200, 863.250, 864.000, 864.050, 864.100, 864.150, 864.200, 864.250, 865.000, 865.050, 865.100, 865.150, 865.200, 865.250

The frequencies 857.000, 858.000, 859.000, 860.000 are available for conventional use only. Also see § 88.837 for National Public Safety Plan frequencies.

(b) **Non-Commercial Radio Service, 806-821/851-866 MHz Band.** The following 60 frequencies are available in the U.S./Mexican border area:

856.275, 856.300, 856.325, 856.350, 856.375, 856.400, 856.425, 856.450, 857.275, 857.300, 857.325, 857.350, 857.375, 857.400, 857.425, 857.450, 858.275, 858.300, 858.325, 858.350, 858.375, 858.400, 858.425, 858.450, 859.275, 859.300, 859.325, 859.350, 859.375, 859.400, 859.425, 859.450, 860.275, 860.300, 860.325, 860.350, 860.375, 860.400, 860.425, 860.450, 861.300, 861.350, 861.400, 861.450, 862.300, 862.350, 862.400, 862.450, 863.300, 863.350, 863.400, 863.450, 864.300, 864.350, 864.400, 864.450, 865.300, 865.350, 865.400, 865.450

(c) **SMR Service, 806-821/851-866 MHz Band.** The following 95 frequencies are available in the U.S./Mexican border area:

856.675, 856.700, 856.725, 856.750, 856.775, 856.800, 856.825, 856.850, 856.875, 856.900, 856.925, 856.950, 856.975, 857.675, 857.700, 857.725, 857.750, 857.775, 857.800, 857.825, 857.850, 857.875, 857.900, 857.925, 857.950, 857.975, 858.675, 858.700, 858.725, 858.750, 858.775, 858.800, 858.825, 858.850, 858.875, 858.900, 858.925, 858.950, 858.975, 859.675, 859.700, 859.725, 859.750, 859.775, 859.800, 859.825, 859.850, 859.875, 859.900, 859.925, 859.950, 859.975, 860.675, 860.700, 860.725, 860.750, 860.775, 860.800, 860.825, 860.850, 860.875, 860.900, 860.925, 860.950, 860.975, 861.700, 861.750, 861.800, 861.850, 861.900, 861.950, 862.700, 862.750, 862.800, 862.850, 862.900, 862.950, 863.700, 863.750, 863.800, 863.850, 863.900, 863.950, 864.700, 864.750, 864.800, 864.850, 864.900, 864.950, 865.700, 865.750, 865.800, 865.850, 865.900, 865.950

(d) **General Pool, 806-821/851-866 MHz Band.** The following 60 frequencies are available in the U.S./Mexican border area:

856.475, 856.500, 856.525, 856.550, 856.575, 856.600, 856.625, 856.650,
857.475, 857.500, 857.525, 857.550, 857.575, 857.600, 857.625, 857.650,
858.475, 858.500, 858.525, 858.550, 858.575, 858.600, 858.625, 858.650,
859.475, 859.500, 859.525, 859.550, 859.575, 859.600, 859.625, 859.650,
860.475, 860.500, 860.525, 860.550, 860.575, 860.600, 860.625, 860.650,
861.500, 861.550, 861.600, 861.650, 862.500, 862.550, 862.600, 862.650,
863.500, 863.550, 863.600, 863.650, 864.500, 864.550, 864.600, 864.650,
865.500, 865.550, 865.600, 865.650

§ 88.811 U.S./Canadian border area.

(a) For the allotment of the 806-821/851-866 MHz band, the U.S./Canada border area is divided into the following **eight geographic regions**:

Region	Location (longitude)
1	66° W-71° W (0-100 km from border)
2	71° W-81° W (0-100 km from border)
3	81° W-85° W (0-100 km from border)
4	85° W-121° 30′ W (0-100 km from border)
5	121°-30′ W 127° W (0-140 km from border)
6	127° W-143° W (0-100 km from border)
7	66° W-121° 30′ W (100-140 km from border)
8	127° W-143° W (100-140 km from border)

(b) For the allotment of the 896-901/935-940 MHz band, the U.S./Canada border area is divided into the following **eight geographic regions**:

Region	Location (longitude)
1	66° W-71° W (0-100 km from border)
2	71° W-80° 30′W (0-100 km from border)
3	80° 30′ W-85° W (0-100 km from border)
4	85° W-121° 30′ W (0-100 km from border)
5	121°-30′ W 127° W (0-140 km from border)
6	127° W-143° W (0-100 km from border)
7	66° W-121° 30′ W (100-140 km from border)
8	127° W-143° W (100-140 km from border)

For assignments in the 896-901/935-940 MHz bands, the cities of Akron, Ohio (41°05′00"N, 81°30′40"W) and Youngstown, Ohio (41°05′57"N, 80°39′02"W) are considered outside of Region 3, and Syracuse, New York (43°03′04"N, 76°09′14"W) is considered outside of Region 2. These cities are defined as an area with the given center coordinates and encompassing a circle of 30 km radius.

§ 88.813 Available frequencies in U.S./Canadian border area.

(a) The frequencies 851-866 MHz listed in paragraphs (c)-(f) of this section are available (together with the paired frequencies 45 MHz lower) in each Region except that **no authorizations** will be made **in the frequency bands in the geographic areas** listed below:

Frequency bands (MHz)	Areas
852-856.25	Between 42°30'N and 43°30'N and within 10 km of the border, and West of 82° W.
852-853.25	Between 43°N and 43'20'N and within 10 km of the border, and East of 80° W.
864-866	Between 42°55'N and 43°20'N and within 15 km of the border, and East of 81° W.
851-852	Between 74°20'W and 72°55'W and within 10 km of the border.
852-853.25	Between 75°20'W and 74°05'W and within 10 km of the border.
864-866	Between 75°30'W and 74°55'W and within 10 km of the border.
851-852	Between 72°10'W and 71°25'W and within 10 km of the border.
852-854.75	Within 10 km of the border West of 121°55'W longitude and North of 48°25'N latitude, excluding the Alaska-British Columbia/Yukon Territory border.

(b) The frequencies 935-940 MHz listed in paragraphs (c)-(f) are **available** (together with the paired frequencies 39 MHz lower) **in each Region** as shown below. Additionally, the frequencies 935.8875, 935.9375, 935.9875, 936.8875, 936.9375, and 936.9875 are available in all regions only for implementation of an **Advanced Train Control System** as defined in 3 FCC Rcd 427 (1988) (Advanced Train Control Waiver).

(c) **Regions 1, 4, 5 and 6.**

(1) **Public Safety Radio Service.** The following 85 frequencies are available in Regions 1, 4, 5 and 6 of the U.S./Canadian border area:

851.0125 - 851.4125, 851.7625 - 852.1625, 852.5125 - 852.9125, 853.2625 - 853.6625, 854.0125 - 854.4125

(2) **Non-Commercial Radio Service.** The following 60 frequencies in the 851-866 MHz band and 52 frequencies in the 935-940 MHz band are available in Regions 1, 4, 5 and 6 of the U.S./Canadian border area:

851.4375 - 852.1875, 852.2125 - 852.4625, 852.9375 - 853.2125, 853.6875 - 853.9625, 854.4375 - 854.7125, 935.3875 - 935.5000, 935.8875 - 936.0000, 936.3875 - 936.5000, 936.8875 - 937.0000, 937.3875 - 937.5000, 939.9750 - 939.9875

(3) **SMR Service.** The following 95 frequencies in the 851-866 MHz band and 100 frequencies in the 935-940 MHz band are available in Regions 1, 4, 5 and 6 of the U.S./Canadian border area:

851.7375, 852.4875, 853.2375, 853.9875, 854.7375, 862.5625 - 862.9875, 863.3125 - 863.7375, 864.0625 - 864.4875, 864.8125 - 865.2375, 865.5625 - 865.9875, 935.0125 - 935.1250, 935.2625 - 935.3750, 935.5125 - 935.6250, 935.7625 - 935.8750, 936.0125 - 936.1250, 936.2625 - 936.3750, 936.5125 - 936.6250, 936.7625 - 936.8750, 937.0125 - 937.1250, 937.2625 - 937.3750

(4) **General Pool.** The following 60 frequencies in the 851-866 MHz band and 50 frequencies in the 935-940 MHz band are available in Regions 1, 4, 5 and 6 of the U.S./Canadian border area:

862.2625 - 862.5375, 863.0125 - 863.2875, 863.7625 - 864.0375, 864.5125 - 864.7875, 865.2625 - 865.5375, 935.1375 - 935.2500, 935.6375 - 935.7500, 936.1375 - 936.2500, 936.6375 - 936.7500, 937.1375 - 937.2500

(d) **Region 2.**

(1) **Public Safety Radio Service.** The following 50 frequencies are available in Region 2 of the U.S./Canadian border area:

851.0125 - 851.2375, 851.4625 - 851.6875, 851.9125 - 852.1375, 852.3625 - 852.5875, 852.8125 - 853.0375

(2) **Non-Commercial Radio Service.** The following 35 frequencies in the 851-866 MHz band and 30 frequencies in the 935-940 MHz band are available in Region 2 of the U.S./Canadian border area:

851.2625 - 851.4125, 851.7125 - 851.8625, 852.1625 - 852.3125, 852.6125 - 852.7625, 853.0625 - 853.2125, 935.3875 - 935.5000, 935.8875 - 936.0000, 936.3875 - 936.5000

(3) **SMR Service.** The following 60 frequencies in the 851-866 MHz band and 60 frequencies in the 935-940 MHz band are available in Region 2 of the U.S./Canadian border area:

851.4375, 851.8875, 852.3375, 852.7875, 853.2375, 863.9375 - 864.1875, 864.3875 - 864.6375, 864.8375 - 865.0875, 865.2875 - 865.5375, 865.7375 - 865.9875, 935.0125 - 935.1250, 935.2625 - 935.3750, 935.5125 - 935.6250, 935.7625 - 935.8750, 936.0125 - 936.1250, 936.2625 - 936.3750

(4) **General Pool.** The following 35 frequencies in the 851-866 MHz band and 30 frequencies in the 935-940 MHz band are available in Region 2 of the U.S./Canadian border area:

863.7625 - 863.9125, 864.2125 - 864.3625, 864.6625 - 864.8125,
865.1125 - 865.2625, 865.5625 - 865.7125, 935.1375 - 935.2500,
935.6375 - 935.7500, 936.1375 - 936.2500

(e) **Region 3.**

(1) **Public Safety Radio Service.** The following 115 frequencies are available in Region 3 of the U.S./Canadian border area:

851.0125 - 851.5375, 852.0125 - 852.5375, 853.0125 - 853.5375,
854.0125 - 854.5375, 855.0125 - 855.5375, 856.0125 - 856.1125

(2) **Non-Commercial Radio Service.** The following 85 frequencies in the 851-866 MHz band and 80 frequencies in the 935-940 MHz band are available in Region 3 of the U.S./Canadian border area:

851.5625 - 851.9125, 852.5625 - 852.9125, 853.5625 - 853.9125,
854.5625 - 854.9125, 855.5625 - 855.9125, 860.7625 - 860.9875,
935.3875 - 935.5000, 935.8875 - 936.0000, 936.3875 - 936.5000,
936.8875 - 937.0000, 937.3875 - 937.5000, 937.8875 - 938.0000,
938.3875 - 938.5000, 938.8875 - 939.0000

(3) **SMR Service.** The following 135 frequencies in the 851-866 MHz band and 170 frequencies in the 935-940 MHz band are available in Region 3 of the U.S./Canadian border area:

851.9375 - 855.9875, 861.4125 - 861.9875, 862.4125 - 862.9875,
863.4125 - 863.9875, 864.4125 - 864.9875, 865.4125 - 865.9875,
935.0125 - 935.1250, 935.2625 - 935.3750, 935.5125 - 935.6250,
935.7625 - 935.8750, 936.0125 - 936.1250, 936.2625 - 936.3750,
936.5125 - 936.6250, 936.7625 - 936.8750, 937.0125 - 937.1250,
937.2625 - 937.3750, 937.5125 - 937.6250, 937.7625 - 937.8750,
938.0125 - 938.1250, 938.2625 - 938.3750, 938.5125 - 938.6250,
938.7625 - 938.8750, 939.0125 - 939.1250

(4) **General Pool.** The following 85 frequencies in the 851-866 MHz band and 90 frequencies in the 935-940 MHz band are available in Region 3 of the U.S./Canadian border area:

856.1375 - 856.2375, 861.0125 - 861.3875, 862.0125 - 862.3875,
863.0125 - 863.3875, 864.0125 - 864.3875, 865.0125 - 865.3875,
935.1375 - 935.2500, 935.6375 - 935.7500, 936.1375 - 936.2500,
936.6375 - 936.7500, 937.1375 - 937.2500, 937.6375 - 937.7500,
938.1375 - 938.2500, 938.6375 - 938.7500, 939.1375 - 939.2500

(f) **Regions 7 and 8.**

(1) **Public Safety Radio Service.** The following 170 frequencies are available in Regions 7 and 8 of the U.S./Canadian border area:

851.0125 - 852.0125, 852.0375 - 852.8375, 853.0125 - 854.0125,
854.0375 - 854.8375, 855.0125 - 855.8375

(2) **Non-Commercial Radio Service.** The following 120 frequencies in the 851-866 MHz band and 99 frequencies in the 935-940 MHz band are available in Regions 7 and 8 of the U.S./Canadian border area:

856.0125 - 856.5875, 857.0125 - 857.5875, 858.0125 - 858.5875,
859.0125 - 859.5875, 860.0125 - 860.5875, 935.3875 - 935.5000,
935.8875 - 936.0000, 936.3875 - 936.5000, 936.8875 - 937.0000,
937.3875 - 937.5000, 937.8875 - 938.0000, 938.3875 - 938.5000,
938.8875 - 939.0000, 939.3875 - 939.5000, 939.8875 - 939.9875

(3) **SMR Service.** The following 190 frequencies in the 851-866 MHz band and 200 frequencies in the 935-940 MHz band are available in Regions 7 and 8 of the U.S./Canadian border area:

851.8625 - 851.9875, 852.8625 - 852.9875, 853.8625 - 853.9875,
854.8625 - 854.9875, 855.8625 - 855.9875, 856.6125 - 856.9875,
857.6125 - 857.9875, 858.6125 - 858.9875, 859.6125 - 859.9875,
860.6125 - 860.9875, 861.6125 - 861.9875, 862.6125 - 862.9875,
863.6125 - 863.9875, 864.6125 - 864.9875, 865.6125 - 865.9875,
935.0125 - 935.1250, 935.2625 - 935.3750, 935.5125 - 935.6250,
935.7625 - 935.8750, 936.0125 - 936.1250, 936.2625 - 936.3750,
936.5125 - 936.6250, 936.7625 - 936.8750, 937.0125 - 937.1250,
937.2625 - 937.3750, 937.5125 - 937.6250, 937.7625 - 937.8750,
938.0125 - 938.1250, 938.2625 - 938.3750, 938.5125 - 938.6250,
938.7625 - 938.8750, 939.0125 - 939.1250, 939.2625 - 939.3750,
939.5125 - 939.6250, 939.7625 - 939.8750

(4) **General Pool.** The following 120 frequencies in the 851-866 MHz band and 100 frequencies in the 935-940 MHz band are available in Regions 7 and 8 of the U.S./Canadian border area:

861.0125 - 861.5875, 862.0125 - 862.5875, 863.0125 - 863.5875,
864.0125 - 864.5875, 865.0125 - 865.5875, 935.1375 - 935.2500,
935.6375 - 935.7500, 936.1375 - 936.2500, 936.6375 - 936.7500,
937.1375 - 937.2500, 937.6375 - 937.7500, 938.1375 - 938.2500,
938.6375 - 938.7500, 939.1375 - 939.2500, 939.6375 - 939.7500

§ 88.815 Coordination with Canada.

Coordination with Canada will be required:

(a) For frequencies in the 808.2625-809.7375/853.2625-854.7375 MHz and 817.2625-818.7375/862.2625-863.7375 MHz bands, for stations to be located in

the geographical area in **Region 1** enclosed by the United States border, the meridian 71° W and the line beginning at the intersection of 44°25'N, 71° W, then running by great circle arc to the intersection of 45° N, 70° W, then North along meridian 70° W to the intersection of 45°45'N, then running West along 45°45'N to the intersection of the United States--Canada border.

(b) For frequencies in the 808.2625-811.2375/853.2625-856.2375 MHz and 815.7625-818.7375/860.7625-863.7375 MHz bands, for stations to be located in the geographical area in **Region 3** enclosed by the meridian 81° W longitude, the arc of a circle of 100 km radius centered at the intersection of 81° W longitude and the northern shore of Lake Erie and drawn clockwise from the southerly intersection with 81° W longitude to intersect the United States-Canada border, and the United States-Canada border.

§ 88.817 Power/antenna height restrictions in U.S./Canadian border area.

Station authorizations in Regions 1-4 and Regions 6-8 for the 806-821/851-866 MHz and 896-901/935-940 MHz bands will be subject to Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limitations as indicated in Table D-4. Stations in Region 5 will be subject to the ERP and antenna height above mean sea level limitations in Table D-5. Effective Radiated Power (ERP) is defined as the product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction. Effective Antenna Height is calculated by subtracting the Assumed Average Terrain Elevation (AATE) given in Table D-6 from the antenna height above mean sea level.

Table D-4

Limits of Effective Radiated Power (ERP) Corresponding to Effective Antenna Heights (EAH) of Base Stations in Regions 1 - 4, 6 - 8		
Meters	Feet	Watts (maximum)
0-152	0-500	500
153-305	501-1000	125
306-457	1001-1500	40
458-609	1501-2000	20
610-762	2001-2500	10
763-914	2501-3000	10
915-1066	3001-3500	6
1067-1219	3501-4000	5
Above 1219	Above 4000	5

Table D-5

Limits of Effective Radiated Power (ERP) Corresponding to Antenna Heights Above Mean Sea Level of Base Stations in Region 5		
Antenna height above mean sea level		ERP watts (maximum)
Meters	Feet	
0 to 503	0 to 1,650	500
504 to 609	1,651 to 2,000	350
610 to 762	2,001 to 2,500	200
763 to 914	2,501 to 3,000	140
915 to 1,066	3,001 to 3,500	100
1,067 to 219	3,501 to 4,000	75
1,220 to 1,371	4,001 to 4,500	70
1,372 to 1,523	4,501 to 5,000	65
Above 1,523	Above 5,000	5